

ART. VIII.—*Report of Cases treated in the Pennsylvania Hospital.* By
GEORGE FOX, M. D., one of the surgeons.

CASE I.—*Ununited Fracture of the Femur. Seton continued during four months without benefit.—Amputation.*

E. F., æt. 33, married, from New Jersey, was admitted 30th of March last, with an ununited fracture of the left femur. She states that she received the injury on the 3d of August, 1847, in falling from a swing, that the end of the upper fragment protruded slightly through the soft parts, which wound, however, healed by the first intention, that the fracture was treated with Hagedorn's splint, and after the first week, four short splints were also applied, bound tightly round the thigh; this treatment was persisted in till the end of February, when no union having taken place they were removed, and pressure tried, also, without effect, until she was brought to the city and admitted into the hospital. At this time the limb was enormously swollen, and very movable at the seat of the fracture; the fragments appeared to be overlapped and separated considerably; by elevating the foot and throwing the limb outwards they were brought into nearer contact. Under these circumstances splints were adapted to the limb, and so arranged as to keep the fragments as closely as possible together; rest and compression were again resorted to and continued three months. Finding at the expiration of that time bony union had not taken place, it was determined in consultation to use the seton, as recommended by Dr. Physick—which I accordingly introduced on the 24th of June. No undue inflammation at any time supervened, though upon several occasions there were slight erysipelatous inflammation and considerable suppuration; the limb was placed in as good position as possible, and after a few weeks a splint made of gutta percha, well padded with cotton, carefully applied; this was worn some weeks, but removed as she seemed more comfortable without it. The seton was persisted in till the 29th of October, when finding it had produced no good effect, it was withdrawn. On the 15th of November amputation of the thigh, above the seat of fracture, was performed by Dr. Norris.

CASE II.—*Compound fracture of the Humerus—Extensive Laceration of Soft parts—Amputation at Shoulder-joint.*

Henry McGuigan, æt. 43, married, labourer, was admitted June 28th, with a compound comminuted fracture of right humerus, extending nearly to the head of the bone, with extensive laceration of the soft parts, caused by the passage of a train of burthen cars over it. The nature and extent of the injury was such as to demand immediate amputation at the shoulder-joint; reaction being fully established, I at once performed the operation. The flap was formed of the deltoid, the artery was readily controlled by pressure, with a key upon it as it passes over the rib. The patient was a large, muscular man; as the division of the lower portion was being made, by a slight involuntary motion of his body he displaced the position of the key, causing at the moment considerable hemorrhage; this was soon checked, the vessels secured, and the wound dressed with adhesive strips, charpie and bandages—an opiate administered, and directed to be repeated if requisite; diet confined to gruel, tea and bread.

July 1st.—Removed and reapplied strips; water-dressings now directed; adhesion by first intention of part of the wound.

18th.—Ligature of axillary artery separated to-day. There has been and still continues very free suppuration; the water-dressings continued.

20th.—Suppuration diminished; union going on well; he is now allowed to get up and has house diet.

Aug. 25th.—Discharged well.

Another amputation at the shoulder-joint was performed by my colleague Dr. Peace, on the 23d of May, on a boy, Robert Simpson, æt. 12, who received a similar injury of the left arm, from being caught in machinery. In this case the flap was also made of the deltoid; nothing unfavourable occurred during the progress of the case, and on the 22d July he was discharged well.

CASE III.—Compound Comminuted Fracture of Skull—Removal of a large portion of Right Parietal Bone—Recovery.

James Stafford, æt. 21, native of Ireland, was admitted early in the morning of 23d of July. The evening previous, whilst engaged in dragging a fire engine, he received a severe injury of the head, caused by a brickbat, thrown from the roof of a house, striking him as he passed. The external wound, situated on the top and right side of the head, is irregular and contused, fracture with depressed bone evident; it is stated that immediately after the injury he was completely insensible; some hours elapsed before he was brought to the hospital; soon after his admission his skin was warm; pulse from 110 to 120, feeble and not perfectly regular; pupils natural; sight good; lays in a semi-stupid state; can, however, be roused without much difficulty, then complains very much of pain in the head, and moans constantly. There is also complete paralysis of the left side; he is directed to be kept perfectly quiet; head to be elevated, and water dressings applied to the wound; a purgative administered; and barley water only allowed as nourishment. In the evening, in consequence of febrile excitement, he was bled 3xvij.

24th. Has passed a restless night; pulse 126; skin warm; bowels freely operated on; complains of pain in the head. At 11 A. M. we proceeded to elevate the depressed bone. Having enlarged the external wound to the extent of five inches, we found the fracture more extensive, and depression greater than we had supposed, a surface of from two and a half to three inches of the right parietal bone being much comminuted and driven in upon the brain; a small projecting portion of bone was removed by Hey's saw, which enabled us to get at and remove all the pieces of bone (seven in number). The dura mater was wounded in three places, from one of which, an inch in extent, cerebral matter escaped; there was considerable hemorrhage from the middle artery of the dura mater; after this ceased, the external wound was brought together with two sutures and adhesive strips, and dry lint applied for the present.

3 P. M. Pulse 120; skin warm; slight delirium and restless; no relief of paralysis. Directed lint wet with cold water to be kept constantly applied to the head, room darkened, and strict quiet enjoined, iced barley water only allowed. *Midnight.* Without material change; pulse 104.

25th. 11 A. M.—Had a restless night; dozed a little; he is perfectly conscious and intelligent; and gives a clear account of the accident; pulse 92; bowels open during the night; complains much; and moans constantly.

7 P. M. Pulse 98; slight erysipelatous inflammation of right side of head and scalp.

26th. 11 A. M.—Passed another restless night; still moans and complains of pain in head and neck; wound suppurating slightly; some brain-like matter is also discharged; pulse 104; skin pleasant; bowels open; continued cold applications to the head; and iced barley water as nourishment.

27th. Rather quieter last night; pulse 88; skin pleasant; intelligence good; though at times there is slight delirium, particularly when first awakened; still complains greatly of his head; directed blisters to be applied to the inside of the calf of the legs, and $\frac{1}{4}$ grain of calomel three times a day. Tapioca and gruel in addition to the barley water.

28th. Had a violent convulsion during the night which lasted nearly an hour; his blisters had drawn well at the time. This morning his pulse is 104, and intelligence good; the discharge of brain-like matter continues, with slight suppuration from wound.

29th. Intelligence good; occasional delirium; pulse 84; same character of discharge from wound.

30th. Complains of being very weak; pulse 90; is allowed mush and milk; cold water dressings continued.

31st. Stitches removed; is allowed weak mutton broth in addition to the other diet.

Aug. 1st. Not so well; had a chill last evening, which, it is feared, is the precursor of more unfavourable symptoms; is very cross, and at times delirious; skin hot; pulse 112, and more feeble; tongue furred; some tympanitis; wound suppurating, and upon pressure an oozing of sanious brain-like matter. Directed an enema containing $\mathfrak{zss}$ ol. terebinthinæ,—continue calomel and cold water dressings; diet to be again restricted to farinaceous articles.

2d. Much better; had a quiet night; pulse 92; skin pleasant.

3d. Passed a good night; intelligence perfect; says he feels pretty easy, though very weak; pulse 80; tongue clean and moist; slight pytalism; the calomel is now omitted, and he is again allowed mutton broth, mush and milk, and ice cream.

10th. Intelligence perfect; pulse 74; skin natural; appetite good; paralysis continues the same; bowels opened daily by enemata; appearance of wound healthy, and cicatrizing. Continue cold water dressings and same diet; the mercurial influence is also kept up.

19th. Condition much the same; the paralysis continuing; a blister is directed to the nape of the neck; to be kept discharging.

24th. To-day can flex his left leg, though he cannot extend it or move his toes; left arm still motionless; in other respects gradually improving; blister still sore.

30th. Moves his arm, though he has no power over his fingers or toes; blister to nape of the neck was reapplied on the 28th.

Sept. 4th. Moves his toes.

7th. Can walk with assistance; blister reapplied yesterday.

12th. Walks with the assistance of a chair; he is up nearly all day; continue same diet, &c.

Oct. 2d. Wound cicatrized; he has nearly regained the perfect use of left leg; the arm also improves.

6th. Discharged from the hospital well, excepting slight paralysis of left arm.

18th. Walked to the hospital to see us. His health is good; scarcely anything to be noticed in his walk; arm much improved.

CASE IV.—Gunshot Wound of Thorax: Death.

John Hayes, an Irishman, aged 27, a coachman by occupation, was brought into the hospital on the 26th of Oct., with a gunshot wound of the thorax. He was said to have lost a good deal of blood from the wound, which was made by a pistol ball; as he lay upon his back, however, when brought in, no blood came from the orifice. The surface was cold, countenance anxious, respiration oppressed, pulse almost extinct. He was put to bed, the upper part of the body elevated, mustard plasters and artificial heat applied to the extremities, and brandy and water administered to him freely. The opening made by the ball was two-thirds of an inch in diameter, and was distant one inch and an eighth from and on a level with the left nipple, and to the right of it, its edges blackened and ragged. At every act of respiration the air passed to and fro through the orifice with a whistling noise. No attempt was made to search for the ball, or determine by instrumental means the nature of the lesions it had produced within the cavity of the chest. Adhesive plaster was placed over the wound, and upon this, lint and muslin soaked in the ethereal solution of gun cotton was placed. Upon drying this adhered firmly over the aperture, effectually preventing the further introduction of air through it into the thorax. A broad roller was then passed around the chest and secured firmly. The left side of the chest was very resonant upon percussion, but the respiratory murmur could not be heard at any part of it. The latter was somewhat increased in loudness upon the right side. In about an hour after the assiduous use of internal and external stimulation the pulse rose, the surface became warmer, and the oppression of the patient diminished slightly. The sound of respiration could then be heard upon the left side and mingled in its lower half, with a moist rhonchus and a very distinct metallic tinkling. The impulse of the heart was feeble, and its sounds diffused and indistinct. He had no expectoration of any kind.

In the evening he seemed very uneasy, continually moaning, but complained of no pain except in the small of his back; yet to this symptom he constantly called attention, seeking earnestly for relief. He was ordered a drachm of the solution of morphia, to be repeated every two hours, and barley water as a drink. At eleven, P. M., his general condition and the physical signs afforded by the chest, continued the same. As he was unable to pass his urine, the catheter was introduced and a pint of urine drawn off.

He slept a little during the night, and was found in the morning somewhat better; his skin was warm, his pulse 120 and feeble, but he was less anxious, and the dyspnœa had diminished. The left side of the chest was now less resonant upon percussion; the metallic tinkling could still be heard, though not so distinctly upon the lower portion of this side in front. The abdomen was somewhat tympanitic, and the muscles of it rigid. He passed his urine himself.

Directed to continue the morphia. At ten o'clock he was ordered Dover's powder three grs., calomel one gr., to be taken every two hours; and his diet limited to arrow root. During the day his pulse rose in frequency, and was extremely feeble, but late in the evening it sank again to 120 beats, and became full and resisting. He was now bled from the arm to the extent of fifteen ounces, after which it became softer and he seemed to experience a slight relief from the dyspnœa. His urine was again drawn off by the catheter, as he was unable himself to void it. He slept at intervals during the night, and in the morning his skin was warm and perspiring, pulse 120, and feeble. His countenance still wore an expression of great anxiety, and he complained bitterly of the pain in his back. His dyspnœa

was greater than before. Respiration could be heard in front over the greater part of the left side, and the moist rhonchus and metallic tinkling were still audible. The powders were discontinued. During the day he seemed to be growing feebler, and his abdomen became very much distended. Attempts were made to relieve this distension by the introduction of an elastic tube into the bowels, by the injection of turpentine enemata, and by turpentine fomentations over the abdomen; but no gas escaped through the tube, the injections were forcibly expelled, and the fomentations failed to relieve him. His stomach became also intolerant of all ingesta, fluid or solid, both being rejected as soon as taken.

He died at eleven, P. M. of the 28th, sixty hours after his accident, and retained his senses perfectly till the last moment.

The body was examined eleven hours after death.

The surface was pale, some discoloration posteriorly, the muscles very rigid. On the left side of the chest one inch and an eighth to the right of the nipple, and in a line drawn from it to the median line, an opening was seen communicating with the interior of the chest.

In dissecting the muscles from the thorax, the external wound was found to correspond with one between the fifth and sixth ribs, slightly grazing the fifth. Blood was extravasated in the intercostal muscles in its neighbourhood. The left lung was found collapsed, and the cavity of the left pleura was half filled with blood partly coagulated and partly fluid. A leaden bullet weighing a fourth of an oz., was found in this cavity, as well as some shreds of clothing. The pericardium contained a large quantity of coagulated blood and was perforated at that portion corresponding to the apex of the left ventricle, with two orifices distant from each other about an inch and a half. The internal surface of the pericardium was lined by a delicate, newly organized false membrane. The heart was firm, and the left ventricle somewhat hypertrophied. On this ventricle near the apex of the heart there was a furrowed wound an inch and a half long, and half an inch wide, which led from one of the orifices in the pericardium to the other, but did not communicate with the cavity of the heart. It was not possible to discover any wound of the substance of the left lung; it could be completely inflated with air and continued to retain the form given to it by the inflation, until the air was allowed to escape through the left bronchus. Between the lobes of the lung, however, when the lungs were filled with air and in a line corresponding to the wound of the heart, several patches of blackened membrane, easily detached, were found, which seemed to indicate the passage of the ball after leaving the pericardium. There was no lesion of the diaphragm or stomach. The intestines were found to be distended with gas, but otherwise they, as well as the peritoneum, were in a perfectly normal condition.

This case was one of much interest. The absence of bloody expectoration led us to infer there was no wound of the lung, although the other physical signs were such as we should have expected to have met with in a wound of that organ. I am indebted to my friend, Dr. M. Stillé, house-surgeon, for the history of the case, and post-mortem.

Two cases of aneurism, one inguinal, the other carotid, came under treatment during my term of service. In the former a ligature was applied to the external iliac; in the latter to the primitive carotid. Both cases are progressing favourably; we will give the details of them in a future number.